

Update on the California Phase 3 Reformulated Gasoline Program Implementation

December, 2003

California Environmental Protection Agency



Air Resources Board

Overview

- ✦ **CaRFG3 Implementation update**
- ✦ **Ethanol Demand, Supply, and Price Issues**
- ✦ **Status of Oxygen Waiver Request**
- ✦ **Ethanol Permeation Study Progress Report**



CaRFG3 Implementation Update

CaRFG3 Regulations

- ✦ **Approved December 1999**
- ✦ **Amended July 2002**
- ✦ **Remove MTBE from California gasoline by December 31, 2003**

Status of Refiners

- ✦ Refiners voluntarily complied with CaRFG3 regulations this year:
 - BP
 - ChevronTexaco (El Segundo)
 - ConocoPhillips
 - ExxonMobil
 - Shell
 - Kern Oil
- ✦ Supplied approximately 70% of California gasoline production

Status of Refiners (cont.)

✦ Remaining refineries to comply with CaRFG3

South Coast AQMD	1 refinery
Bay Area AQMD	3 refineries

✦ Transition begun, full compliance by December 31, 2003

Status of Terminals for Ethanol Distribution

✦ Common Terminals

> Kinder Morgan

- Completed modifications
- Shipping CARBOB as of December 1, 2003

> All other terminal operators

- Completed modifications

✦ Proprietary Terminals

- Completed modifications, except a ChevronTexaco terminal in Eureka (March 2004)



Ethanol Demand, Supply, and Price Issues

Ethanol Demand

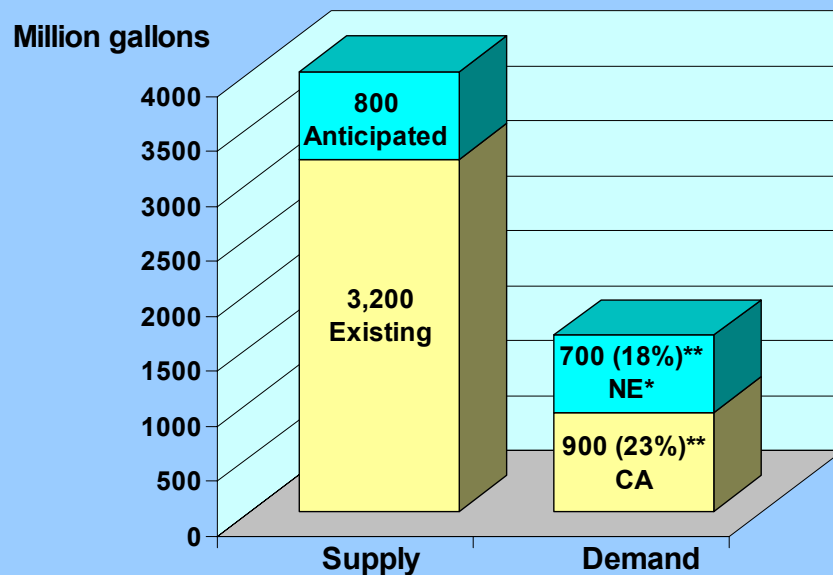
✦ California

- In 2004, demand for ethanol estimated about 900 million gallons

✦ Northeastern States

- New York and Connecticut banned MTBE use by Jan 1, 2004
- Demand for ethanol estimated 400 to 700 million gallons annually, depending on economy of ethanol blend

Estimated 2004 Ethanol Domestic Supply vs. CA and NE* States Demand

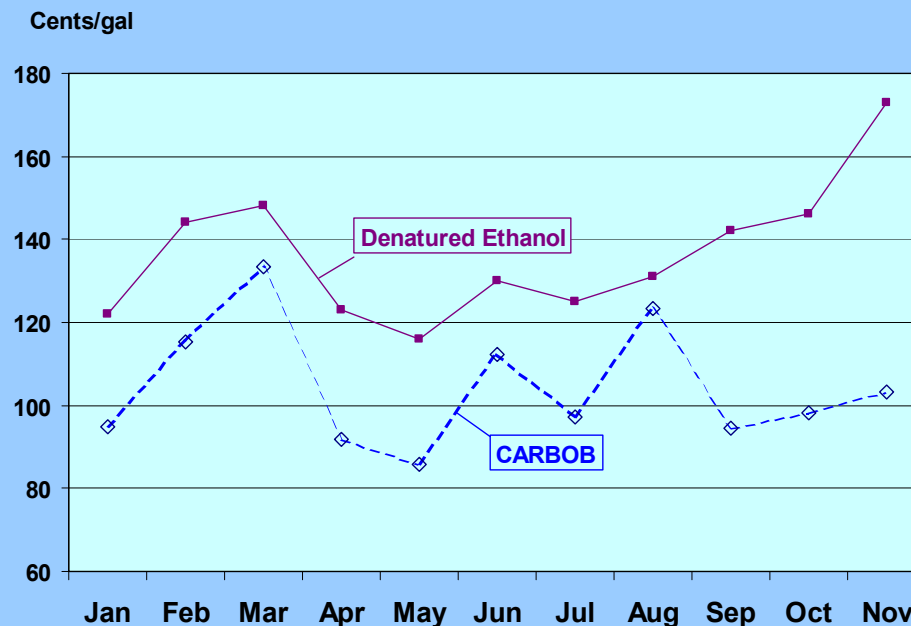


Source : *Ethanol Supply Outlook For California*, CEC, Oct. 2003

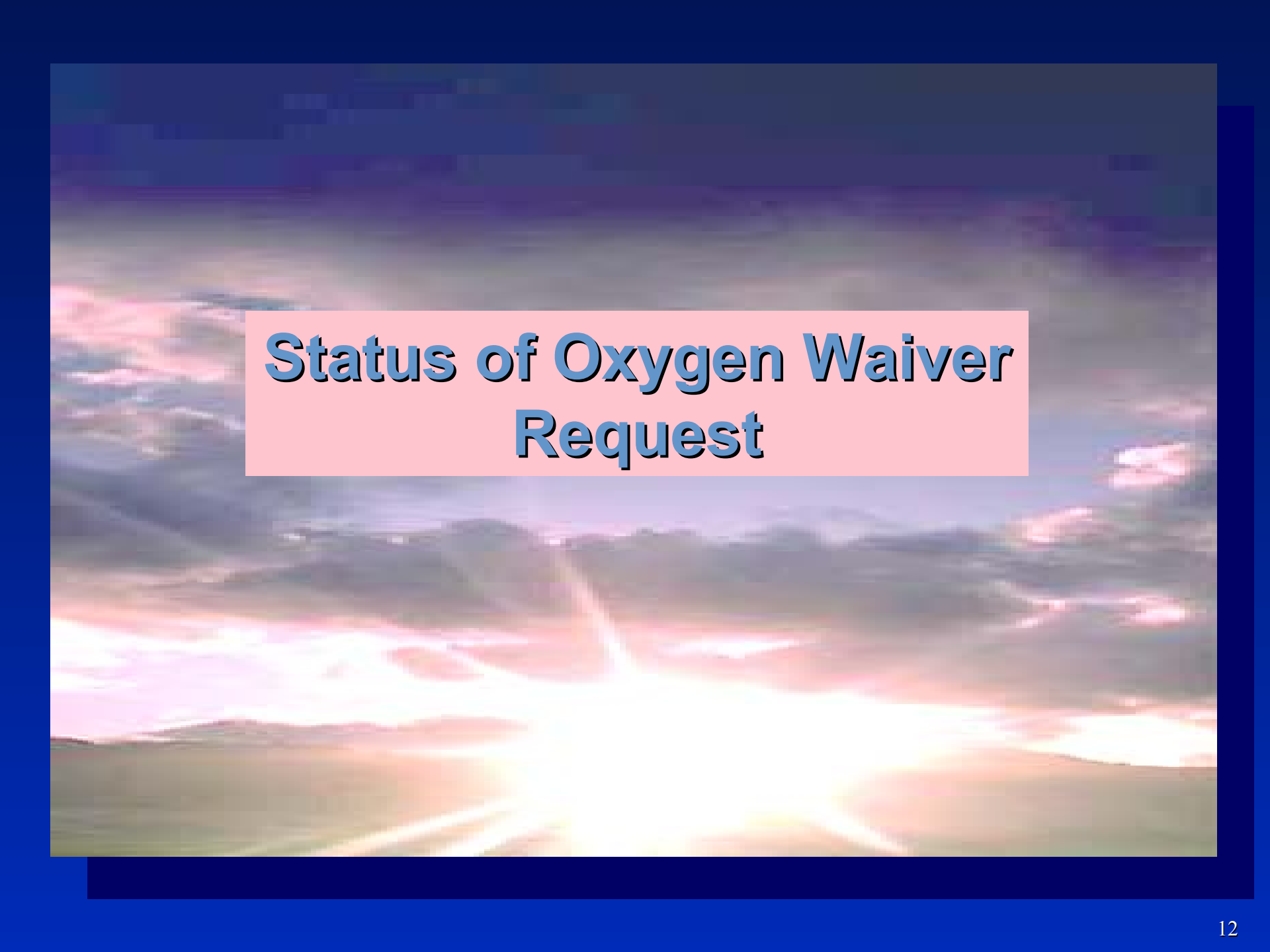
*New York and Connecticut

**As percent of total supply

2003 California Average Spot Price CARBOB vs. Ethanol



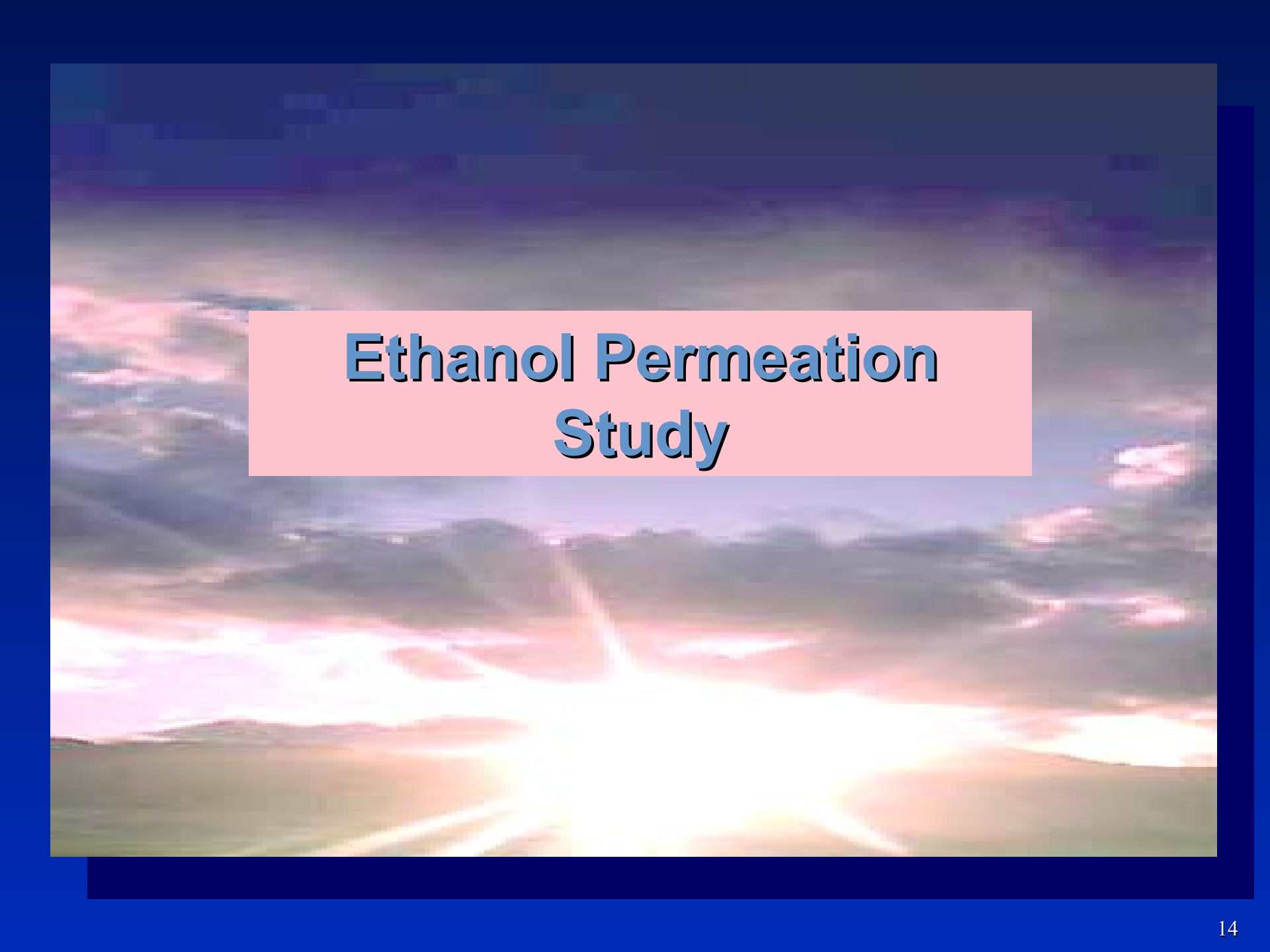
Source : California Energy Commission and Oil Price Information Service

The background of the slide is a photograph of a sky at dawn or dusk. A bright sun is positioned in the lower center, creating a large, intense white and yellow glow that radiates outwards. The sky is filled with dark, heavy clouds that are tinged with shades of purple and blue, suggesting the time is either early morning or late evening. The overall mood is dramatic and hopeful.

Status of Oxygen Waiver Request

California Oxygen Waiver Request to U.S. EPA

- ✦ Submitted application in February, 2000
- ✦ U.S. EPA denied the request in June, 2001, on the basis of uncertainty on “commingling effect”
- ✦ July 2003, U.S. Court of Appeals for the Ninth Circuit vacated the U.S. EPA decision
- ✦ Staff is in the process of supplying new information on commingling and permeation emissions

The background of the slide is a photograph of a sunset or sunrise. The sun is a bright, glowing orb in the lower center, casting long, shimmering rays across the sky and reflecting on the water below. The sky is filled with soft, wispy clouds in shades of pink, orange, and purple. The water in the foreground is dark and calm, with the sun's reflection creating a bright path. A semi-transparent pink rectangular box is centered over the image, containing the title text.

Ethanol Permeation Study

Ethanol Permeation Emissions Study

- ✦ Evaluate the potential for increased evaporative hydrocarbon emissions due to the permeation of ethanol
 - > A joint research with CRC
 - > Test program included:
 - 10 representative vehicles
 - 3 fuels
 - > A preliminary report expected early next year